FOR QUALITY & EXCELLENCE IN HIGHER EDUCATION
Accredited by NAAC

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15/

DATE: 17-02-2015

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (28 days Compressive Strength)
{Project*: Construction of culverts and repairs reconstruction of secondary Nala in Ward No.11 (Kuvempurnagar)}

Ref.: Letter No. Testing/BUB/2014-15 dated 16-02-2015

Sample supplied to lab by: Sri.V.Mohanakumar, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Vidyaranyapura Sub-Division. BBMP, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M_{20}
Location : Drain Concrete.

TABLE 1.1 :

Sl No	Location/ Identification *	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	19-01-15	16-02-15	28	22500	520	23.11	**22.66**
	002	"	"	"	"	500	22.22	
	003	"	"	"	"	510	22.66	
2	004	"	"	"	"	500	22.22	**23.03**
	005	"	"	"	"	525	23.33	
	006	"	"	"	"	530	23.55	

* As furnished by Client.
The Results relate only to the items tested.

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Compus
BANGALORE UNIVERSITY
Bangalore-560 056.

JE-II

ಸಹಾಯಕ ಕಾರ್ಯ ಪಾಲಕ ಅಭಿಯಂತರರು
ವಿದ್ಯಾರಣ್ಯಪುರ ಉಪ ವಿಭಾಗ
ಯಲಹಂಕ ವಲಯ,
ಬೃ ಬೆಂ. ಮ. ಪಾ., ಬೆಂಗಳೂರು-97

Dr. MANJESH .L
ME(Civil Engg.) Ph.D., MISTE, MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus,
BANGALORE 560 056.
E-mail: manjeshl@yahoo.com

FOR QUALITY & EXCELLENCE IN HIGHER EDUCATION
Accredited by NAAC

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15/

DATE: 16-02-2015

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (28 days Compressive Strength)
{Project*: Construction of culverts and repairs reconstruction of secondary Nala in Ward No.11 (Kuvempurnagar)}

Ref.: Letter No. Testing/BUB/2014-15 dated 14-02-2015

Sample supplied to lab by: Sri.V.Mohanakumar, Contractor, Bangalore.

Report required for: Assistant Executive Engineer, Vidyaranyapura Sub-Division. BBMP, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M_{15}
Location : Coping Concrete.

TABLE 1.1 :

Sl No	Location/ Identification *	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	17-01-15	14-02-15	28	22500	500	22.22	**22.29**
	002	"	"	"	"	515	22.88	
	003	"	"	"	"	490	21.77	
2	004	"	"	"	"	520	23.11	**23.18**
	005	"	"	"	"	535	23.77	
	006	"	"	"	"	510	22.66	
3	007	"	"	"	"	530	23.33	**23.70**
	008	"	"	"	"	535	23.77	
	009	"	"	"	"	540	24.00	

* As furnished by Client.
The Results relate only to the items tested.

16/02/2015

Dr. MANIESH .L
ME(Civil Engg.) Ph.D., MISTE, MIRC
Associate Professor
Department of Civil Engineering
Bangalore University, Jnanabharathi Campus,
BANGALORE 560 056.
E-mail: manieshl@yahoo.com

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Campus
BANGALORE UNIVERSITY
Bangalore-560 056.

JE-1

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರ ಕಛೇರಿ
ವಿದ್ಯಾರಣ್ಯಪುರ ಉಪ ವಿಭಾಗ
ಯಲಹಂಕ ವಲಯ,
ಬೃ. ಬೆಂ. ಮ. ಪಾ., ಬೆಂಗಳೂರು-97.

FOR QUALITY & EXCELLENCE IN HIGHER EDUCATION
Accredited by NAAC

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15

DATE: 18-02-2015

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (28 days Compressive Strength)
{Project*: Construction of Culverts and Repairs, Reconstruction of Secondary Nala in Ward No.11 (Kuvempunagara) Vidyaranyapura Sub Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 07-01-2015

Sample supplied to lab by : Assistant Executive Engineer,
Vidyaranyapura Sub Division,
BBMP, Bangalore

Name of the Contractor/Agency*: Sri.Mohan Kumar.V, Contractor, Bangalore.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1 :

Sl No	Location/ Identification *	Date of Casting*	Date of Testing	Age in Days	C/S Area in Mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	19-01-15	16-02-15	28	22500	530	23.55	**23.33**
	002	"	"	"	"	520	23.11	
	003	"	"	"	"	525	23.33	

*As Furnished by Client.
The Results relate only to the items tested.

JE-1
Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore-97

Page No. 1/1,

Dr. MANJESH .L
ME (Civil Engg) Ph D MISTE.MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus
BANGALORE- 560 056
e- mail. manjeshl@yahoo.com

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Compus
BANGALORE UNIVERSITY
Bangalore-560 056.

JE-1

ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ವಿದ್ಯಾರಣ್ಯಪುರ ಉಪ ವಿಭಾಗ,
ಯಲಹಂಕ ವಲಯ,
ಬ. ಬೆಂ. ಮ. ಪಾ. ಬೆಂಗಳೂರು-97

FOR QUALITY & EXCELLENCE IN HIGHER EDUCATION
Accredited by NAAC

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15

1. TESTING OF FINE AGGREGATES : **Date: 12-01-2015**

Sub: Testing of Fine Aggregates.
{Project*: Construction of Culverts and Repairs, Reconstruction of Secondary Nala in Ward No.11 (Kuvempunagara) Vidyaranyapura Sub Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 07-01-2015

Sample supplied to lab by : Assistant Executive Engineer,
Vidyaranyapura Sub Division,
BBMP, Bangalore

Name of the Contractor/Agency*: Sri.Mohan Kumar.V, Contractor, Bangalore.

TABLE - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -III	
04.75	97.80	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	83.60	60-95	75-100	85-100	
01.18	74.10	30-70	55-90	75-100	
600. mic	47.90	15-34	35-59	60-79	
300.mic	21.00	5-20	8-30	12-40	
150.mic	2.80	0-10	0-10	0-10	

TABLE 1.2 ;

Sl No	Test Conducted	Sample	Results	Requirements as Per IS. Specification IS :383-1970 (Reaffirmed 2002)
1	Silt Content	001	1.44 %	Not more than 8%
2.	Specific Gravity	----	2.52	-------

*As Furnished by Client.
The Results relate only to the items tested.

JE-II
Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore-97

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Compus
BANGALORE UNIVERSITY
Bangalore-560 056.

JE-II

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ವಿದ್ಯಾರಣ್ಯಪುರ ಉಪ ವಿಭಾಗ,
ಯಲಹಂಕ ವಲಯ,

12/01/2015
Dr. MANJESH L.
ME (Civil Engg) Ph D MISTE MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus
BANGALORE- 560 056
e- mail: manjeshl@yahoo.com

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

JNANA BHARATHI
BANGALORE - 560 056

FOR QUALITY & EXCELLENCE IN HIGHER EDUCATION
Accredited by NAAC

BUB/CTE/2014-15

1. TESTING OF COARSE AGGREGATES (40 mm): **Date: 12-01-2015**

Sub: Testing of Coarse Aggregates.
{Project*: Construction of Culverts and Repairs, Reconstruction of Secondary Nala in Ward No.11 (Kuvempunagara) Vidyaranyapura Sub Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 07-01-2015

Sample supplied to lab by : Assistant Executive Engineer,
Vidyaranyapura Sub Division,
BBMP, Bangalore

Name of the Contractor/Agency*: Sri.Mohan Kumar.V, Contractor, Bangalore.

Table - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2002) % Passing	
	40 mm Sample	*Single size*	*Graded*
40mm	96.80	85-100	95 – 100
20mm	62.30	0 -20	30- 70
10mm	26.10	0 -5	10- 35
4.75mm	Nil	------	0 - 5

TABLE 1 2 :

SL No	Test conducted	Sample No	Results	Requirements as per IS:383-1970 & Test Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2002)
1.	Flakiness Index	As above	15.30 %	Not to exceed 25 %
2.	Crushing value	----,,----	26.00 %	Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces

*As Furnished by Client.
The Results relate only to the items tested.

JE-II

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore-97

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Campus
BANGALORE UNIVERSITY
Bangalore-560 056.

12/01/2015
Dr. MANJESH .L
ME (Civil Engg) Ph D MISTE.MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus
BANGALORE- 560 056
e- mail. manjeshl@yahoo.com

FOR QUALITY & EXCELLENCE IN HIGHER EDUCATION
Accredited by NAAC

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15

1. TEST REPORT ON CEMENT:

Date: 16-01-2015

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Construction of Culverts and Repairs, Reconstruction of Secondary Nala in Ward No.11 (Kuvempunagara) Vidyaranyapura Sub Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 07-01-2015

Sample supplied to lab by : Assistant Executive Engineer,
Vidyaranyapura Sub Division,
BBMP, Bangalore

Name of the Contractor/Agency*: Sri.Mohan Kumar.V, Contractor, Bangalore.

PHYSICAL TESTS ON CEMENT

Brand* : Birla
Grade * : 53
Type * : OPC
Date : 08-01-2015 to 15-01-2015

SL No	Name of Test	Results	Requirements as per IS 12269-1987
		Cement Sample	
1	Initial setting time	**145 min**	Shall not be less than 30 min
2	Final setting time	**255min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**2.20 %**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**1.80 mm**	Shall not be more than 10 mm
5	Compressive strength e) 3 days (average of three results) f) 7 days (average of three results)	**29.40 N/ Sq mm** **40.60 N/Sq mm**	Shall not be less than 27 N/Sqmm Shall not be less than 37N/Sqmm

*As Furnished by Client.
The Results relate only to the items tested.

JE-II
VRV
Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Campus
BANGALORE UNIVERSITY
Bangalore-560 056.

16/01/2015
Dr. MANJESH .L
ME (Civil Engg) Ph D MISTE.MIRC
Associate Professor
Department of Civil Engineering
Bangalore University Jnanabharathi Campus
BANGALORE- 560 056
e- mail: manjeshl@yahoo.com

FOR QUALITY & EXCELLENCE IN HIGHER EDUCATION
Accredited by NAAC

BANGALORE UNIVERSITY
DEPARTMENT OF CIVIL ENGINEERING

Phone Off: 080-22961935 / 1946
E-mail: centrans9@gmail.com

JNANA BHARATHI
BANGALORE - 560 056

BUB/CTE/2014-15 **Date: 12-01-2015**

1. TEST REPORT ON REINFORCEMENT STEEL:

Sub: Testing of Reinforcement Steel of diameter 10mm.
{Project*: Construction of Culverts and Repairs, Reconstruction of Secondary Nala in Ward No.11 (Kuvempunagara) Vidyaranyapura Sub Division}

Ref. : Letter No. Testing/BUB/2014-15, dated 07-01-2015

Sample supplied to lab by : Assistant Executive Engineer,
Vidyaranyapura Sub Division,
BBMP, Bangalore

Name of the Contractor/Agency*: Sri.Mohan Kumar.V, Contractor, Bangalore.

TABLE – 1

SL No	Details	For 10mm	
		Test Results	Min Req as per IS 1786-2008
01	Observed diameter of bar	**10.0mm**	10.0mm
02	Observed Wt/m Length **Kg/m**	**0.622**	0.567
03	Proof stress/Yield stress, fy , **N/mm^2**	**556.0**	500.0
04	Bend/ Re bend Test	**Ok**	---
05	Percentage of Elongation, %	**20.70**	12.00
06	Ultimate Tensile Strength **N/mm^2**	**622.0**	545.0

*As furnished by Client.
The Results relate only to the items tested.

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore - 97

Page No. 1/1,

12/1/2015

Dr. MANJESH .L
ME (Civil Engg). Ph D MISTE.MIRC
Associate Professor
Department of Civil Engineering
Bangalore University: Jnanabharathi Campus
BANGALORE- 560 056
e- mail: manjeshl@yahoo.com

G.R. HARISH
Professor
Department of Civil Engineering
Jnana Bharathi Compus
BANGALORE UNIVERSITY
Bangalore-560 056.